

REMARKS

REJECTION UNDER 35 U.S.C. §103:

On page 2, claims 1 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baldwin et al. (U.S. Patent No. 5,276,630 – hereinafter Baldwin). The Examiner acknowledges on page 2 that Baldwin is directed to an air conditioning system, not a refrigerator. A refrigerator, as stated in page 1 of the instant specification, generates cold air required for refrigeration or freezing. A refrigerator is used to freeze or chill food for preservation. Baldwin is directed to an air conditioner that is a non-analogous device that controls the humidity and temperature of air. Additionally, Baldwin discusses that the HVAC system can be used for heating or cooling (col. 5, lines 31-42). Therefore, the air-conditioner found in Baldwin is not applicable to the present invention of a refrigerator.

The present invention includes a control unit that determines the operation load of the refrigerator based on information received from the sensors and for “controlling the condenser fan in connection with operation of the compressor.” Baldwin describes a unit that operates the compressor and condenser fan at the same time and does not shut off the condenser fan if the compressor is overloaded. The present invention allows the control unit to stop both the compressor and condenser fan if the control unit determines that the compressor is not required to be on if the operation load is not large. Baldwin is silent on a control unit for “controlling the condenser fan in connection with operation of the compressor.”

Baldwin shows in Figure 3 the control unit determining if the compressor should be scheduled on or off and if the condenser fans should be on or off as separate steps or algorithms (col. 7, lines 39-52; ref. 126 and 128). Baldwin does not teach or suggest a control unit that relates “whether the compressor is operated or not” to “controlling the condenser fan in connection with operation of the compressor.” Additionally, in the detailed compressor operation schedule found in Baldwin (fig. 6), Baldwin is silent on the interrelation between the condenser fan and the operation of the compression (col. 9, lines 18-58). Therefore, Baldwin does not teach or suggest claims 1 and 4.

On page 3, claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Baldwin in view of Lee (U.S. Patent No. 5,983,653). The Examiner acknowledges on page 3 of the Office Action that Baldwin does not teach or suggest “a built in temperature sensor or the operation load being calculated based on the temperature sensor reading.” Baldwin also fails to

teach or suggest "controlling the condenser fan in connection with operation of the compressor." That is, in the present invention, the operation of the compressor depends on the whether or not the compressor is operated. Therefore, in the present invention, the control unit controls the condenser fan in connection with the operation of the compressor.

Thus, Baldwin teaches away from the limitations of the present invention.

On page 3 of the Office Action, the Examiner asserts that Lee makes up for the deficiencies of Baldwin. Although Lee discusses a refrigeration system, Lee is silent on the operation of the compressor. Therefore, Lee cannot be relied upon to cure the deficiencies of Baldwin. Neither Lee nor Baldwin, individually or combined, recite, "controlling the condenser fan in connection with operation of the compressor."

On page 3, claims 3 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baldwin in view of Oike (U.S. Patent No. 4,856,287). Oike discusses comparing the temperature signal (7) from a refrigerator from a temperature sensor (col. 2, lines 43-50), but fails to teach or suggest, "the disorder of the outdoor temperature sensor is diagnosed based on a result of the comparison." Oike discusses failure in the temperature sensor, however is silent on "the control unit displaying the sensor disorder through a display unit." Therefore, Oike cannot be relied upon to cure the deficiencies of Baldwin. Neither Oike nor Baldwin, individually or combined, recite "the control unit displaying the sensor disorder through a display unit."

Withdrawal of the foregoing rejections is respectfully requested.

Claim 5 is amended to reflect its status as a method claim dependent on original, independent claim 4 and to include the limitation of "if a sensor disorder is detected, the control unit displaying the sensor disorder through a display unit." New claim 6 recites that the features of the present invention include a condenser fan controller that includes "a control unit running the compressor responsive to an operation load of the refrigerator if the outdoor temperature sensor is out of order and for controlling the condenser fan responsive to the running of the compressor." New claim 7 recites that the features of the present invention include a method of controlling a refrigerator based on the operation of an outdoor temperature sensor by, "turning a compressor on and off responsive to an operation load of the refrigerator when the outdoor temperature sensor is not operating; and turning on a condenser fan when the compressor is on and turning off the condenser fan when the compressor is off." Nothing in the prior art teaches or suggests such. It is submitted that these new claims, which are different and not narrower than prior filed claims distinguishes over the prior art.

CONCLUSION:

In accordance with the foregoing, Applicants respectfully submit that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.


If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned agent for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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